ABSTRACT

An ionically complexed colorant compound is provided, comprising an ionic dye component having an apparent color characteristic, a first dye counterion component having a known color characteristic that exhibits a color difference from the ionic dye component of at least about $10~\Delta E^*$ units, and a colorless counterion component. The ionic dye component is ionically complexed with the first dye counterion component and colorless counterion component in a predetermined ratio to form an ionically complexed colorant compound exhibiting a predetermined color. Compositions and methods of use of these colorants are also provided. Additionally, compositions are provided wherein the ionic dye component, the first dye counterion component, and the colorless counterion component are ionically complexed in a predetermined ratio to form ionically complexed compounds that together in a colorant composition exhibit a predetermined color. Compositions and methods of use of these compositions are also provided.